

## Abstract

A method and a system for processing carrier materials by means of heavy ion irradiation and subsequent etching, wherein the irradiation with heavy ions is carried out in such a way that a beam (1) of a high-energy heavy ion radiation (1.1) impinges on the surface (2) of a carrier material under at least two different angles. The fluence, energy and impinging direction of the heavy ion rays (1.1) are selected in such a way that there will result a maximum number of intersecting or coinciding latent ion traces (3) and common intersections of the recesses (4) resulting from a chemical etching process following heavy ion irradiation are obtained.